ABSTRACT OF THE DISCLOSURE

An imaging unit composed of a pair of objective lens systems and an imaging device that photoelectrically converts optical images into image signals is incorporated in the distal portion of an inserting section of an endoscope. The pair of objective lens systems is arranged in order to pick up images while viewing an object from a plurality of viewing points. Optical images having traveled through the pair of objective lens systems are converged on the imaging device. A measuring device consists mainly of a camera control unit (CCU), a video capture circuit, a host computer, and a console. The CCU converts image signals, which result from photoelectric conversion performed by the imaging device, into video signals according to which images are displayed on a monitor. The video capture circuit converts the produced video signals into digital image signals. The host computer serving as an arithmetic unit performs arithmetic operations needed for measurement using the resultant digital image signals. The measuring device is operated using the console. A desired cutting plane is designated using the reference image displayed on the monitor, whereby section information concerning a viewer's desired section determined with the cutting plane can be acquired.